



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/659,372 | 09/11/2003 | Masayuki Kurita | 520.43119X00 | 3020 |

20457 7590 12/01/2005

ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-3873

EXAMINER

WATKO, JULIE ANNE

ART UNIT PAPER NUMBER

2653

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/659,372

Applicant(s)

KURITA ET AL.

Examiner

Julie Anne Watko

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-9 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>09/11/2003</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
2. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
4. The disclosure is objected to because of the following informalities: On page 9, lines 31-32, the specification recites "the Y-Y cross-section in Fig. 3". This is inconsistent with the appearance of Fig. 3, which does not show Y-Y.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2653

6. Claims 1-2, 4, 7 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Kamijima (US Pat. No. 2003/0099054 A1).

As recited in claim 1, Kamijima shows a magnetic head slider (see Figs. 3-4, for example), comprising: a recording element 43 for recording information on a magnetic disk; a reproducing element 42 for reproducing information from the magnetic disk; a slider (including 41) for mounting thereon said recording element and said reproducing element, disposed opposing the magnetic disk 10, to be used; and a heat generating portion 45 provided on said slider, for thermally expanding a vicinity of at least said reproducing element, wherein said heat generating portion and said reproducing element are disposed, so that an end portion of said slider on a surface side 44 opposing to the magnetic disk 10, in said heat generating portion, is located deeper (see Fig. 4, wherein the depth direction is rightward) than an end portion of said slider on a surface side opposing to the magnetic disk, in said reproducing element, at least.

As recited in claim 2, Kamijima shows that said recording element and said reproducing element are constructed to be a single element (see Fig. 6, especially 57; see especially ¶ 0070, “57 denotes an upper shield layer, which doubles as a lower magnetic pole layer”).

As recited in claim 4, Kamijima shows that said recording element 43 and said reproducing element 42 are thin-films on a substrate, being disposed so that said heat generating portion 45 locates on said substrate 40 side with respect to said recording element 43 and said reproducing element 42, in a normal direction of the substrate, i.e., in a direction of laminating the thin-films (see locations of parts in Fig. 11; see also ¶ 0068), and being provided with a layer (flexible layer 116) made of a resin material (“thermally cured resist layer”, see ¶ 0091) between

Art Unit: 2653

said heat generating portion and said substrate (see location of 116 in Fig. 11) relating to said thin-film laminating direction.

The product by process limitations in these claims (e.g. "formed through laminating") are directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessman*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final structure of the product "gleaned" from the process limitations or steps, which must be determined in a "product by process" claim, and not the patentability of the process limitations. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in "product by process" claims or not. Note that the applicant has the burden of proof in such cases, as the above case law makes clear.

As recited in claim 7, Kamijima shows that the surface of said slider opposing to the magnetic disk builds up an air-bearing surface (ABS 44, see ¶ 0067).

As recited in claim 9, in addition to the above teachings, Kamijima shows a magnetic disk device (see Fig. 1), comprising: a magnetic disk 10.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2653

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 5-6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamijima (US Pat. No. 2003/0099054 A1).

Kamijima shows a slider as described above.

Kamijima is silent regarding the ranges of dimensions and heater resistances specifically recited in claims 5-6 and 8.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have had the magnetic head of Kamijima satisfy the relationships set forth in claims 5-6 and 8. The rationale is as follows: one of ordinary skill in the art would have been motivated to have had the magnetic head of Kamijima satisfy the relationships set forth in claims 5-6 and 8 since it is notoriously old and well known in the magnetic head art to routinely modify a magnetic head structure in the course of routine optimization /experimentation and thereby obtain various standard optimized relationships including those set forth in claims 5-6 and 8. Moreover, absent a showing of criticality (i.e., unobvious or unexpected results), the relationships set forth in claims 5-6 and 8 are considered to be within the level of ordinary skill in the art.

Additionally, the law is replete with cases in which when the mere difference between the claimed invention and the prior art is some range, variable or other dimensional limitation within the claims, patentability cannot be found.

It furthermore has been held in such a situation, the Applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range. *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Moreover, the instant disclosure does not set forth evidence ascribing unexpected results due to the claimed dimensions or resistance values. See *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338 (Fed. Cir. 1984), which held that the dimensional limitations failed to point out a feature which performed and operated any differently from the prior art.

Allowable Subject Matter

10. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lille (U.S. PAP No. 2005/0046995 A1) shows a head comprising "heating element 902 to heat a layer of MSSQ 904. This causes enhanced protrusion in excess of that caused by coil heating" (see ¶ 0067; see also Fig. 9) "to allow the head to fly at a higher physical spacing when the head is not in a read or write mode, thereby protecting the head, yet be in close proximity to

Art Unit: 2653

the media during reading and/or writing for allowing heads to read and write with reduced track width, bit length and error rate" (see ¶ 0015), wherein "A similar protrusion effect can be made by placing a resistor elsewhere in the head" (see ¶ 0069).

Takahashi et al (U.S. PAP No. 2003/0174430 A1) show a magnetic disk apparatus comprising a head with heat generating coils 56a and 56b and thermal expanding members 54a and 54b, and recording and reproducing elements 46 and 48 (see especially Figs. 3-5C).

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Anne Watko whose telephone number is (571) 272-7597. The examiner can normally be reached on Monday-Thursday until 4:45PM, and Friday until 6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Julie Anne Watko
Primary Examiner
Art Unit 2653

November 30, 2005
JAW

